

Notice of Allowability

Application No.

09/826,108

Examiner

Heather R Long

Applicant(s)

GALLAGHER, ANDREW C.

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 10/28/2004.
2. ☒ The allowed claim(s) is/are 1-18 (renumbered as 1,2,4,3,5-16,18, and 17 respectively).
3. ☒ The drawings filed on 04 April 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Allowable Subject Matter

1. Claims 1-18 are allowed.
2. The following is an examiner's statement of reasons for allowance: Prior art fails to teach or fairly suggest an image processing method for compensating for light falloff in a digital image, in combination with all the other elements claimed, comprising the steps of:
 - a. Providing individual compensation values to correct light falloff in one or more of the image pixels, whereby the individual compensation values induce a balance change in the digital image; determining a balance value, which is independent of location within the digital image; and applying the individual compensation values and the balance value to the one or more pixels of the input digital image to provide a corrected image having compensation for light falloff with minimal change to the light balance (claim 1).
 - b. Determining a balance value for correcting the balance change of the digital image; and wherein the step of determining a balance value comprises the steps of applying the individual compensation values to the one or more pixels of the input digital image to provide an intermediate corrected image and computing the balance value from the difference of the mean intensity of the central portions of the input digital image and the corrected digital image (claim 6).
 - c. Using the falloff compensation information to generate an individual compensation value for one or more of the image pixels; determining a balance value from the falloff compensation information, the balance value being

independent of location within the digital image; and applying the individual compensation value and the balance value to the one or more pixels of the digital image to provide a corrected image having compensation for light falloff with minimal change to the light balance (claim 7).

d. Determining a balance value from the falloff compensation information, wherein the step of determining a balance value from the falloff compensation information is accomplished by determining the average of at least two individual compensation values (claim 10).

e. Using the falloff compensation function and the parameter value to generate individual compensation values for one or more of the image pixels; determining a balance value from the falloff compensation function and the parameter value, the balance value being independent of location within the digital image; and applying the individual compensation values and the balance value to said one or more image pixels of the digital image (claim 13).

f. Using the falloff compensation mask to generate an individual compensation value for one or more of the image pixels; determining a balance value from the falloff compensation mask, the balance value being independent of location within the digital image; and applying the individual compensation value and the balance value to the one or more image pixels of the digital image (claim 14).

g. Providing individual compensation values to correct light falloff in one or more of the image pixels, whereby the individual compensation values induce a

balance change in the input digital image; determining a balance value, which is independent of location within the digital image; and applying the individual compensation values and the balance value to the one or more pixels of the input digital image to provide a corrected image having compensation for light falloff with minimal change to the light balance (claim 15).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Gallagher et al. (U.S. Patent 6,670,998) discloses an image processing method for compensating for light falloff in a digital image wherein individual compensation values for individual pixels are used in order to provide a corrected image. However, Gallagher et al. fails to disclose generating a balance value to go along with the individual compensation value to provide a corrected image.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heather R Long whose telephone number is 571-272-

7368. The examiner can normally be reached on Mon. - Thurs.: 7:00 am - 4:30 pm, and every other Fri.: 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Groody can be reached on 571-272-7950. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Heather R Long
Examiner
Art Unit 2615

HRL
April 15, 2005


TUAN HO
PRIMARY EXAMINER